

REMARKS

Applicants have considered the outstanding official action. It is respectfully submitted that the claims are directed to patentable subject matter as set forth below.

Claims 2, 9-16, 19-28, 35-38, 45-50, 55-58, 62-65, 67-68 and 70-71 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite based on certain matters as set forth at page 2 of the outstanding office action. Applicants have amended the claims to address the matters raised by the Examiner. Withdrawal of the §112 rejection is respectfully requested.

The outstanding rejections based on art are as follows:

- (1) Claims 2, 12, 16, 24, 26, 28, 38, 48, 50, 56 and 67 under 35 U.S.C. §103(a) over U.S. Patent No. 5,849,681 (Neumiller '681);
- (2) Claims 10, 14, 20, 22, 36, 46 and 58 under 35 U.S.C. §103(a) as unpatentable over Neumiller '681 as applied to the above claims, and further in view of U.S. Patent No. 5,716,921 (Neumiller '921);

- (3) Claims 2, 11-12, 15-16, 23-28, 37-38, 47-50, 55-56, 62-63, 65, 67-68 and 70-71 under 35 U.S.C. §103(a) over EP 0 527 625 A2 (Cummings);
- (4) Claims 2, 12, 16, 24, 26, 28, 36, 38, 48, 50, 56, 67 and 70 under 35 U.S.C. §103(a) over U.S. Patent No. 5,540,864 (Michael);
- (5) Claims 10, 14, 20, 22, 36, 46 and 58 under 35 U.S.C. §103(a) over Michael as applied to the above claims and further in view of Neumiller '921;
- (6) Claims 9-10, 13-14, 19-22, 35-36, 45-46 and 57-58 under 35 U.S.C. §103(a) over Cummings as applied to the above claims, and further in view of Neumiller '921;
- (7) Claims 2, 11-12, 15-16, 23-28, 37-38, 47-50, 55-56, 62-65, 67-68 and 70-71 under 35 U.S.C. §103(a) over WO 99/11123 (Conway);
- (8) Claims 9-10, 13-14, 19-22, 35-36, 45-46 and 57-58 under 35 U.S.C. §103(a) over Conway as applied to the above claims, and further in view of Neumiller '921;
- (9) Claims 11, 15, 23, 25, 27, 37, 49, 55, 62-65, 68 and 71 under 35 U.S.C. §103(a) over Michael as

applied to the above claims, and further in view of Conway;

(10) Claims 11, 15, 23, 25, 27, 37, 47, 49, 55 and 62-65 under 35 U.S.C. §103(a) over Neumiller '681 as applied to the above claims, and further in view of Conway;

(11) Claims 64 under 35 U.S.C. §103(a) over Cummings as applied to the above claims, and further in view of Conway;

(12) Claims 2, 9, 11-13, 15-16, 19, 21, 23-28, 35-38, 45, 47-50, 55-57, 62-65, 67-68 and 70-71 under 35 U.S.C. §103(a) over U.S. Patent No. 5,534,198 (Masters); and

(13) Claims 10, 14, 20, 22, 46 and 58 under 35 U.S.C. §103(a) over Masters as applied to the above claims, and further in view of Neumiller '921.

Applicants respectfully traverse the rejections. Essentially the Examiner's argument in the assertion of unpatentability under 35 U.S.C. §103 in each rejection is that the individual components are known and that the amounts of various components as claimed overlap with ranges taught in the applied art. The Examiner acknowledges that each applied reference, including those applied alone, fail to teach certain claimed elements. Such are then asserted

to be an obvious modification to one skilled in the art since it is a known compound, e.g., surfactant, and that the amounts are merely a matter of optimization.

Applicants submit, however, that the Examiner's argument does not take into account all the claim limitations and does not present a prima facie case of obviousness within the meaning of 35 U.S.C. §103. A rejection under 35 U.S.C. §103 must rest on a firm factual basis and deficiencies in the factual basis cannot be supplied by resorting to speculation or unsupportable generalities. In re Warner, 379 F.2d 1011, 154 USPQ 173 (CCPA 1967) and In re Freed, 425 F.2d 785, 165 USPQ 570 (CCPA 1970).

The rejection of the Examiner makes it clear that the Examiner is choosing select parts of the prior art disclosures based on applicants' own teaching, i.e., knowing the end composition sought and the problem to be solved. This is using improper hindsight. Thus, as the Court of Appeals for the Federal Circuit stated in In re Rouffet, 149, F.3d 1350, 1357, 47 USPQ2d 1453, 1457 (Fed. Cir. 1998):

"As this court has stated, "virtually all [inventions] are combinations of old elements." *Environmental Designs, Ltd. v. Union Oil Co.*, 713 F.2d 693, 698, 218 USPQ 865, 870 (Fed. Cir. 1983); see also *Richdel, Inc. v. Sunspool Corp.*, 714 F.2d 1573, 1579-80, 219 USPQ 8, 12 (Fed. Cir. 1983) ("Most, if not all, inventions are combinations and mostly of old elements."). Therefore an

examiner may often find every element of a claimed invention in the prior art. If identification of each claimed element in the prior art were sufficient to negate patentability, very few patents would ever issue. Furthermore, rejecting patents solely by finding prior art corollaries for the claimed elements would permit an examiner to use the claimed invention itself as a blueprint for piecing together elements in the prior art to defeat the patentability of the claimed invention. Such an approach would be "an illogical and inappropriate process by which to determine patentability." *Sensonics, Inc. v. Aerosonic Corp.*, 81 F.3d 1566, 1570. 38 USPQ2d 1551, 1554 (Fed. Cir. 1996).

To prevent the use of hindsight based on the invention to defeat patentability of the invention, this court requires the examiner to show a motivation to combine the references that create the case of obviousness. In other words, the examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed."

In the case at hand, there is no motivation to choose only select parts of the applied reference and modify such so as to provide a combination as claimed by applicants, in particular since all of the limitations of the claims are not taken into account. As held by the Court of Appeals for the Federal Circuit, a combination may be patentable whether it be composed of elements all new, partly new or all old. Rosemount, Inc. v. Beckman Instruments, Inc., 727 F.2d 1540, 1546; 221 USPQ 1, 7 (Fed. Cir. 1984). Obviousness or nonobviousness is based on the "making of the combination"

in the first instance and not determined upon the effect of the claimed combination. Beatrice Foods Co. v. Tsuyama Mfg. Co., 619 F.2d 3, 7; 204 USPQ 889, 893 (CA7 1979).

Further, this is in accordance with KSR Int'l. Co. v. Teleflex Inc., 127 S. Ct. 1727, 82 USPQ2d 1385 (2007) wherein the U.S. Supreme Court stated –

“a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. Although common sense directs one to look with care at a patent application that claims as innovation the combination of two known devices according to their established functions, it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. This is so because inventions in most, if not all, instances rely on building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known.” (127 S.Ct. at 1741, 82 USPQ2d at 1396).

The Court in KSR, supra, additionally referred to In re Kahn, 441 F.3d 977, 988 (C.A. Fed. 2006) which states

“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”.

Applicants claimed compositions include a specified combination of defined components in stated amounts to provide a composition with a reduced VOC content of less than 4% while providing acceptable cleaning. The

patent art relied on by the Examiner does not provide any teaching or suggestion to choose only select components from a myriad of compounds not distinguished from each other, as well as provide such in a particular amount selected from a range which includes unworkable amounts, e.g., would result in a VOC content in the composition above the claimed content thereby taking the composition outside its claimed parameters.

More specifically as to the applied art, the references of Neumiller '681, Cummings, Michael, Conway and Masters are each applied alone under 35 U.S.C. §103 as to independent claims 2 and/or 62. Neumiller '681 is also applied in combination with Conway as to independent claim 62. As to each of these references, the Examiner acknowledges that the reference fails to teach some component(s), and/or component amount(s), and VOC content. These missing components are then stated to be obvious to provide since such involves mere substitution of another known compound and optimization of an amount. No further basis is provided. No additional teaching is provided and other limitations are not taken into consideration, i.e., the particular water solubility and surface tension reduction capacity with respect to the low volatile non-VOC evaporative solvent.

More particularly, as to Neumiller '681, the Examiner acknowledges that Neumiller '681 fails to specifically disclose a composition including an amphoteric surfactant and the combination of amphoteric and anionic surfactants as claimed, but simply states that such addition would be obvious in order to adjust the surface tension of the composition taught in Neumiller '681. Applicants respectfully submit that it would not have been obvious to one of ordinary skill in the art at the time of the invention to incorporate an amphoteric surfactant or the combination of anionic and amphoteric surfactants as asserted by the Examiner to adjust the surface tension of the composition as taught by Neumiller '681 and obtain applicants' claimed composition. Neumiller '681 in addition to not teaching or suggesting an amphoteric surfactant does not recognize the problem addressed by applicants and does not provide any teaching as to VOC content, in particular provides no recognition of criticality as to VOC content or the VOC content in combination with the defined low volatile non-VOC evaporative organic solvent. There is no basis for modifying the composition described in Neumiller '681 to provide the combination as claimed by applicants. If it was desired to modify the surface tension of the composition as taught in Neumiller '681, one skilled in the art would use



one of the surfactants taught therein as being compatible with the other components and not use a different surfactant not recognized as compatible. Further, no recognition is provided as to the criticality of including in the composition a low volatile non-VOC evaporative glycol ether solvent with the claimed limited water solubility and ability to reduce surface tension to less than 40 dynes/cm, as well as inclusion of a co-solvent of from the first solvent having different solubility and surface tension reduction capacity, and including an alcohol and alkanolamine. The only manner in which this particular claimed combination of elements could be provided is through the use of impermissible hindsight. Thus, Neumiller '681 does not render the invention as claimed obvious within the meaning of 35 U.S.C. §103(a).

As to the rejection based on Cummings, the Examiner acknowledges that Cummings fails to specifically disclose a composition comprising an amphoteric surfactant or the combination of amphoteric and anionic surfactants, and the VOC content of the composition which is less than 4% by weight, or 3%, or about 1% by weight or less. The Examiner asserts that it would be obvious to incorporate an amphoteric surfactant or combination of amphoteric and anionic surfactants because Cummings suggests their

combination as suitable surfactants, and that the VOC content is obvious as mere optimization through routine experimentation. Applicants respectfully submit that it would not have been obvious to one of ordinary skill in the art at the time of the invention to incorporate an amphoteric surfactant or the combination of anionic and amphoteric surfactants to the composition of Cummings and to provide a composition with the VOC content as claimed in that Cummings does not teach or suggest a cleaning composition including an amphoteric surfactant in combination with the claimed VOC content and the claimed defined solvent, i.e., a low-volatile non-VOC evaporative organic solvent that has limited solubility in water of less than 20% and reduces surface tension of the composition to less than 40 dynes/cm. Cummings also does not teach the inclusion of an alcohol or alkanolamine as a co-solvent in a combination as claimed. Further, Cummings does not recognize the problem being addressed by applicants of providing a cleaning composition with a low VOC content yet still providing acceptable cleaning ability. Thus, Cummings does not recognize any criticality in providing the limitations in combination as claimed, i.e., the particular surfactant (at least an amphoteric surfactant), defined VOC content and low volatile evaporative glycol ether solvent

with defined properties, in particular the surface reduction capacity as claimed, and co-solvent including an alkanolamine and alcohol. Accordingly, Cummings does not render the invention as claimed obvious within the meaning of 35 U.S.C. §103(a). No suggestion is present to one skilled in the art to selectively modify these elements to provide the combination with properties as claimed to achieve the composition as claimed.

As to the rejection based on Michael, Michael does not teach or suggest each and every claimed element. In particular, Michael does not teach a hard surface cleaning composition having the combination as claimed including the defined glycol ether low volatile non-VOC evaporative organic solvent having a limited solubility in water of less than 20% and ability to reduce surface tension of the composition to less than 40 dynes/cm, an amphoteric surfactant and a co-solvent different from the glycol ether solvent and including at least an alcohol and an alkanolamine. Michael does not provide any recognition of criticality as to VOC content or provide any teaching or suggestion which would motivate one skilled in the art to pick select claimed compounds and provide such in the claimed amount to be within the claimed VOC content. Thus, Michael also does not render the claimed invention obvious within the meaning of 35 U.S.C. §103.

As to the rejection based on Conway, the Examiner acknowledges that Conway fails to specifically disclose an aqueous cleaning composition which comprises ethylene glycol n-hexyl ether, amphoteric and anionic surfactants, isopropanol, propylene glycol or monoethanolamine in the amounts as claimed and wherein the composition has a VOC content which is 4% by weight or less as claimed but submits that such components would be obvious to provide in optimum amounts and that the VOC content would be an obvious selection based on optimization of a result effective variable. Applicants submit that it would not have been obvious to one of ordinary skill in the art at the time of the invention to prepare an aqueous cleaning composition comprising ethylene glycol n-hexyl ether, amphoteric and anionic surfactants, isopropanol, propylene glycol or an alkanolamine, in particular monoethanolamine, in the amounts as claimed and wherein the composition has a VOC content which is 4% by weight or less as claimed based on mere optimization since Conway does not provide any recognition of the problem being addressed by applicants or provide any recognition as to criticality as to VOC content, water solubility of the solvent or surface tension reduction capacity of the solvent, in particular wherein the solvent is a low volatile evaporative solvent. Thus, no guidance or suggestion is provided as to picking and choosing select

components, in select amounts to achieve a defined VOC content in order to achieve the particular combination claimed by applicants. Conway teaches ranges considered optimum. Such ranges include up to 10% aliphatic alcohol and up to 5% of secondary alcohols. Thus, Conway provides a composition useful as a hard surface cleaner which can have a VOC content of as much as 15% based on these components alone. In the absence of other teaching, no suggestion is provided to obtain a VOC content as claimed with a combination of components as claimed. To the extent Conway provides examples of a composition with a VOC content of a lesser amount, such compositions do not include the claimed amphoteric surfactant. The assertion of the Examiner is based on a selection of isolated components set forth in Conway and further modifying these components in order to achieve applicants' composition as claimed. No teaching or suggestion is present as to how to "optimize" the components set forth in Conway to obtain the particular combination as claimed. Accordingly, Conway does not render the composition as claimed obvious within the meaning of 35 U.S.C. §103(a).

As to Masters (newly applied), Masters teaches glass cleaning compositions which are described as typically containing detergent surfactants, solvents, builders, etc. It is further described that such prior art is often

insufficient as to cleaning without leaving objectionable levels of spots and/or other films. The detergent composition disclosed to overcome this deficiency is stated to include (a) a detergent surfactant selected from anionic, amphoteric (including zwitterionic) and mixtures thereof as well as a nonionic co-surfactant; (b) hydrophobic volatile solvent; (c) alkaline material; (d) substantive polymer and (e) an aqueous solvent system including water and optionally a non-aqueous polar solvent. The hydrophobic volatile solvent is described at column 6, lines 63 to column 7, line 2 as being a degreasing solvent such as commonly used in the dry cleaning industry, hard surface cleaner industry, or metalworking industry. No teaching or recognition of criticality is provided as to the volatile organic compound (VOC) content of the composition. Rather, based on the teaching set forth above, e.g., the examples of the dry cleaning industry and metal working are known for using highly volatile solvents, and that the hydrophobic volatile solvents are taught for use in an amount of from 0.5-30%, preferably 2-8%, and more preferably from 3-8% the VOC content would not be understood as being significant. Thus, due to the high end range limits described, Masters clearly does not recognize any criticality in providing an aqueous

cleaning composition with a VOC content which must be less than 4%.

Further, Masters does not teach or provide any recognition of criticality as to including a solvent which is a low volatile non-VOC evaporative glycol ether solvent of the defined formula which has a limited solubility in water of less than 20% and which reduces surface tension of the composition to less than 40 dynes/cm. Additionally, Masters teaches the ability to include an aqueous polar solvent in an amount of 0.5 to 40%. Again, there is no criticality recognized as to limiting volatility.

Thus, Masters does not provide any teaching or suggestion which would result in picking and choosing select components and providing such in a particular combination as claimed by applicants as to amounts, components, volatility, water solubility and surface tension reduction capacity. In fact, Masters recognizes the desirability of inclusion of hydrophobic volatile solvents in improving the cleaning ability of the composition (column 6, line 63 to column 7, line 2). Thus, Masters does not render the claims obvious within the meaning of 35 U.S.C. §103.

As to the combination of Michael and Conway as applied to independent claim 62 and other dependent claims; and the combination of Neumiller '681 and Conway as to claim

62 and other dependent claims, these combinations fail to render the claims obvious within the meaning of 35 U.S.C. §103 for the same reasons as set forth above. Each of the references suffer the same deficiencies and, thus, a combination thereof can not in this instance make up for these deficiencies. The same applies with respect to the rejections of the dependent claims based on a combination of two of the primary references discussed above. Neumiller '921, the only secondary reference applied, is relied on for an additional limitation present in a dependent claim essentially on the basis of disclosing a compound which is asserted as being an obvious substitution for another compound which the primary reference does not disclose. The only basis for the asserted substitution is that both components fall within the same generic chemical description, e.g. both are surfactants. Accordingly, the secondary reference of Neumiller '921 does not make up for the shortcomings of the primary references with which it is applied.

In summary, the claimed hard surface cleaning compositions include specified combinations of components which in turn have specified features and are present in a defined amount. The compositions of claim 2 include (1) at least one glycol ether solvent which is a low volatile non-



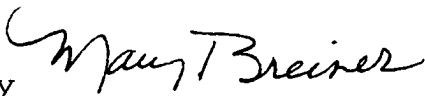
VOC evaporative organic solvent with a limited water solubility of less than 20% and reduces surface tension of the composition to less than 40 dynes/cm, (2) at least one amphoteric surfactant, (3) at least one co-solvent which is different than (1), including as to solubility in water and surface tension reduction capacity, and includes an aliphatic alcohol, an alkanolamine and a polyhydric alcohol, and (4) an aqueous carrier, wherein the composition has a VOC content of less than about 4% by weight. Claim 62, the only other independent claim includes (1) a least one glycol ether solvent which is a low volatile non-VOC evaporative organic solvent with a limited water solubility of less than 20% and reduces surface tension of the composition to less than 40 dynes/cm, (2) at least one amphoteric surfactant, (3) at least one co-solvent which is different than (1), including as to solubility in water and surface tension reduction capacity, and includes an aliphatic alcohol and an alkanolamine, (4) a polymer or copolymer, and (5) an aqueous carrier, wherein the composition has a VOC content of less than about 4% by weight. Based on the many compounds and possible combinations thereof disclosed in the applied art and lack of suggestion for selecting and combining the variously disclosed compounds as claimed, in particular in view of the lack of recognition as to the problems addressed

by applicants and the specific defining properties claimed as to the respective components to achieve a composition with a VOC content of less than 4% by weight while still providing acceptable cleaning properties, applicants respectfully submit that the applied art provides no teaching or suggestion for selectively choosing isolated elements and combining in such a manner as to achieve applicants' claimed compositions. None of the applied art teaches each and every element of the claims. Further, some reasonable basis needs to be provided in the applied art to suggest modification to achieve the claimed composition so as to render the claims obvious within the meaning of §103. No such reason is present. A mere assertion of optimization without more, in view of the differences described above, is respectfully submitted to be not sufficient under 35 U.S.C. §103.

Reconsideration and allowance of the claims are respectfully urged.

Respectfully submitted,

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